

Appln No. 09/550,757

Amdt date September 21, 2004

Reply to Office action of June 21, 2004

REMARKS/ARGUMENTS

Claims 30-36, 38-46, 48-49, and 60-67 are pending. Claims 30, 32, 40, 42, 60, and 62 are amended.

Claims 30-36, 38-46, 48, and 60-67 are objected to because of informalities. In view of the amendments to claims 30, 32, 40, 42, 60, and 62, it is respectfully requested that the above-mentioned objection be withdrawn.

Claims 30-36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langberg et al (U.S. Patent 6,243,425), in view of Takatori et al. (U.S. Patent 5,581,585); Claims 40-46, 48, 49, and 60-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langberg, in view of Morton et al., and Takatori et al.. Applicants submit that all of the claims currently pending in this application are patentably distinguishable over the cited references, and reconsideration and allowance of this application are respectfully requested.

Independent claim 30 includes among other limitations, "a precoder having a plurality of tap coefficients being ramped from an initial value to a final value, wherein when the plurality of tap coefficients of the precoder reach their final value, the corresponding tap coefficients of the decision feedback filter will be at a corresponding final value of zero."

None of the cited references, alone or in combination, teach or suggest the above-mentioned limitation. For example, the system of Langberg increments the precoder values enabling "the ISI filter 64 to track the updating of the precoder values. As the precoder values are slowly updated, the quality of the signals received by receiver 16 slowly improves, and, in

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response, ISI filter 64 is designed to slowly reduce the values of its equalizer coefficient values. As a result, the coefficient values within ISI filter 64 are prevented from reaching values that result in error propagation, thereby preventing the occurrences of retrains." (Col. 5, lines 18-26). However, Langberg does not disclose "a precoder having a plurality of tap coefficients being ramped from an initial value to a final value, wherein when the plurality of tap coefficients of the precoder reach their final value, the corresponding tap coefficients of the decision feedback filter will be at a corresponding final value of zero," as recited by amended claim 30.

Similarly, Morton does not disclose the above-mentioned limitation. In fact Morton is clear in emphasizing that "the coefficient of the precoder feedback filter are trained during start up and remain fixed thereafter." (Page 2, lines 2-3).

Therefore, the amended independent claim 30 is patentable in view of the cited references. Dependent claims 31-36 and 38-39 are all dependent from claim 30 and therefore include all the limitations of the independent claim 30 and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent from an allowable independent claim 30 and for the additional limitations they include therein.

Independent claims 40 and 60 include among other limitations, "a feedforward filter including a plurality of feedforward filter taps, a feedforward filter reference tap, and a coefficient for each feedforward filter tap, wherein the

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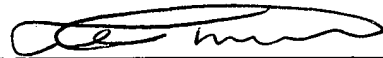
reference tap is located proximate a center position of the feedforward filter and a value of the coefficient of the reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps."

None of the cited references, alone or in combination, teach or suggest the above-mentioned limitation. Therefore, the amended independent claims 40 and 60 are also patentable in view of the cited references. Dependent claims 41-46, 48-49, and 61-67 are all dependent from claims 40, and 60, respectively and therefore include all the limitations of their respective independent claims and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent from allowable independent claims and for the additional limitations they include therein.

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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